Headquarters U.S. Air Force

Integrity - Service - Excellence

AF Architecting CONOPS, Governance, and Federation

Lt Col Jerry Huffman
Mr. Dennis Dempsey
SAF/A6PA
28 April 2010

Year of the Air Force
Family

Report Documentation Page

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15. SUBJECT TERMS

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Agenda

- **USAF Architecture CONOPS and Architecture Governance Process**
- **Architecture Federation**

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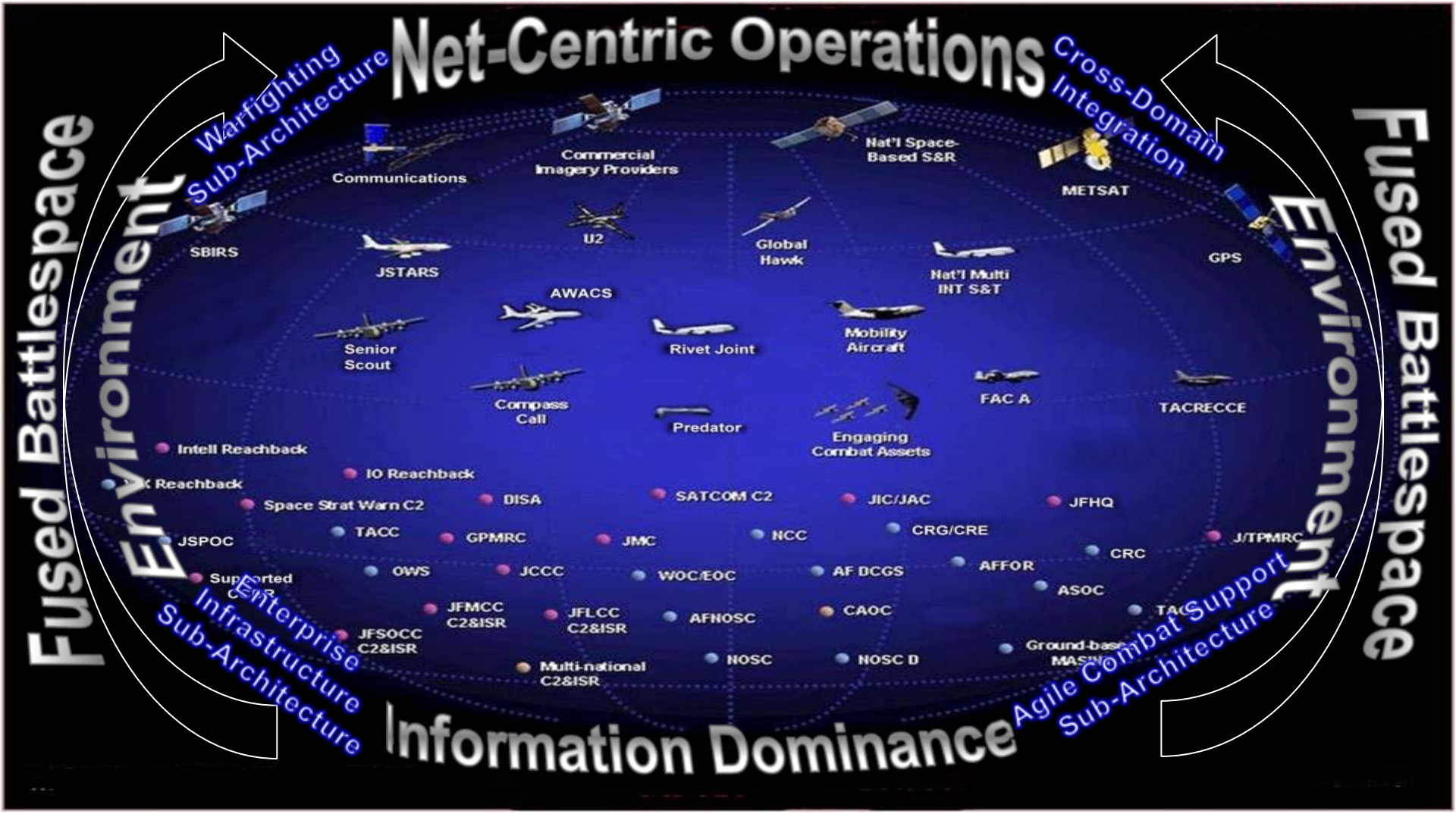
Warfighter Integration
What's in Play



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Architecting
'The Concept'

Problem Statement:

AF leaders make complex decisions on a daily basis affecting the AF Enterprise. However, the second and third order effects of those decisions often impact seemingly disparate portions of the enterprise in fundamental ways (good or bad) that were unforeseen by the decision-maker simply because the relationship data was not available when the decision was made. Architecture can eliminate some of the 'fog' of decision-making by defining these relationships in a format the decision-maker can easily understand.

Vision:

As leaders of architecture in the Air Force, we deliver timely, relevant, unambiguous information to support informed decision-making by Air Force leaders to maximize military capabilities while optimizing allocation of resources.

End State:

The AF architecture capability is integrated into AF decision-making processes

CONOPS Intro

Air Force Architecting Concept of Operations

Version 1.0
December 2009

BOBBY W. SMART, SES
Director, Policy and Resources
Office of Warfighting Integration and
Chief Information Officer

DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

OFFICE OF THE SECRETARY 2 December 2009

MEMORANDUM FOR RECORD

FROM: SAF/XCPA
1800 Air Force Pentagon
Washington DC 20330-1800

SUBJECT: Air Force Architecting Concept of Operations

As the Chief Architect of the Air Force I approve the Air Force Architecting Concept of Operations for immediate use by all Air Force architecting organizations.

My point of contact is Colonel David Geuting, david.geuting@pentagon.af.mil.

BOBBY W. SMART, SES
Director, Policy and Resources
Office of Warfighting Integration and
Chief Information Officer

Follow this link to explore on the XC Portal Page

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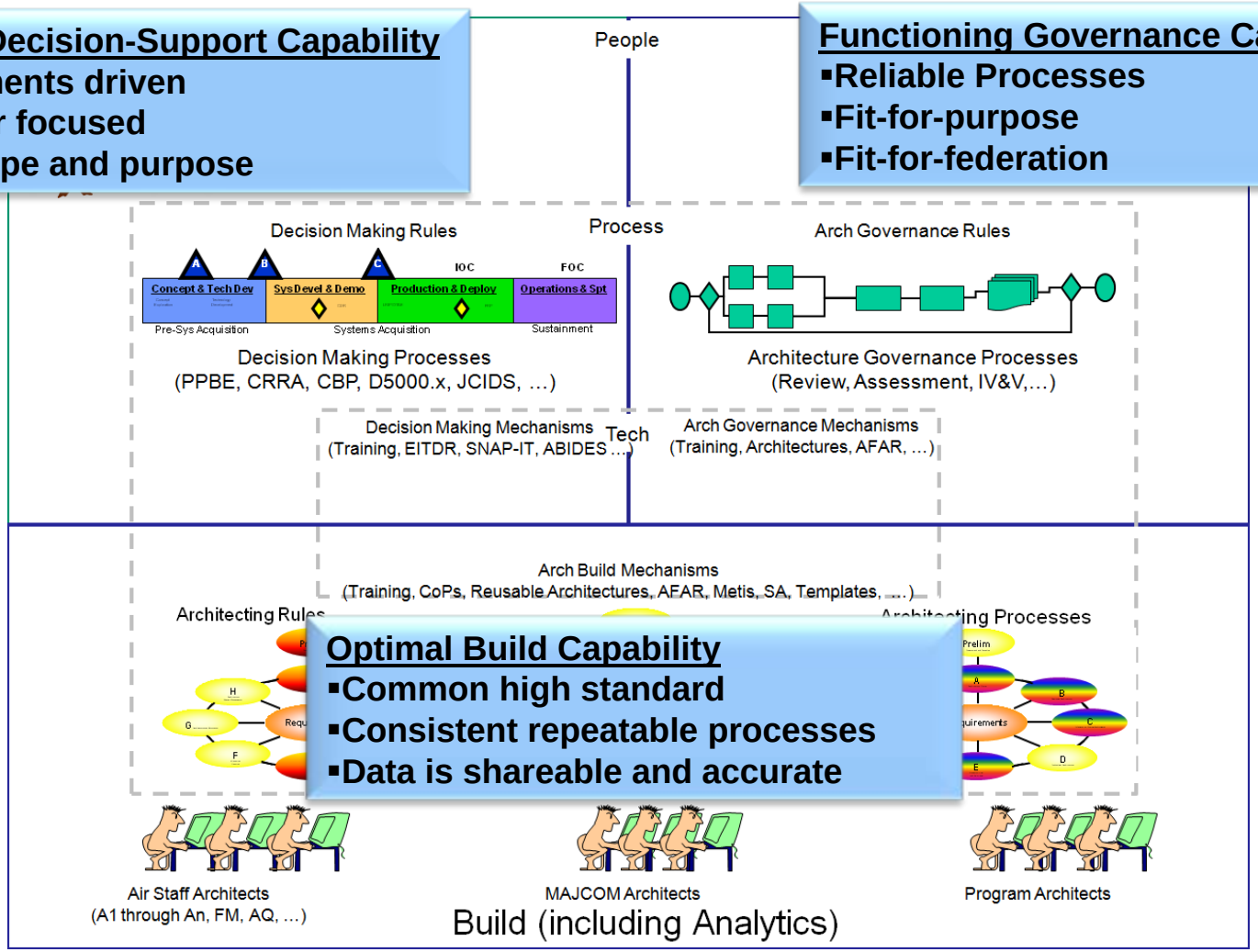
Architecting
'Critical Capabilities'

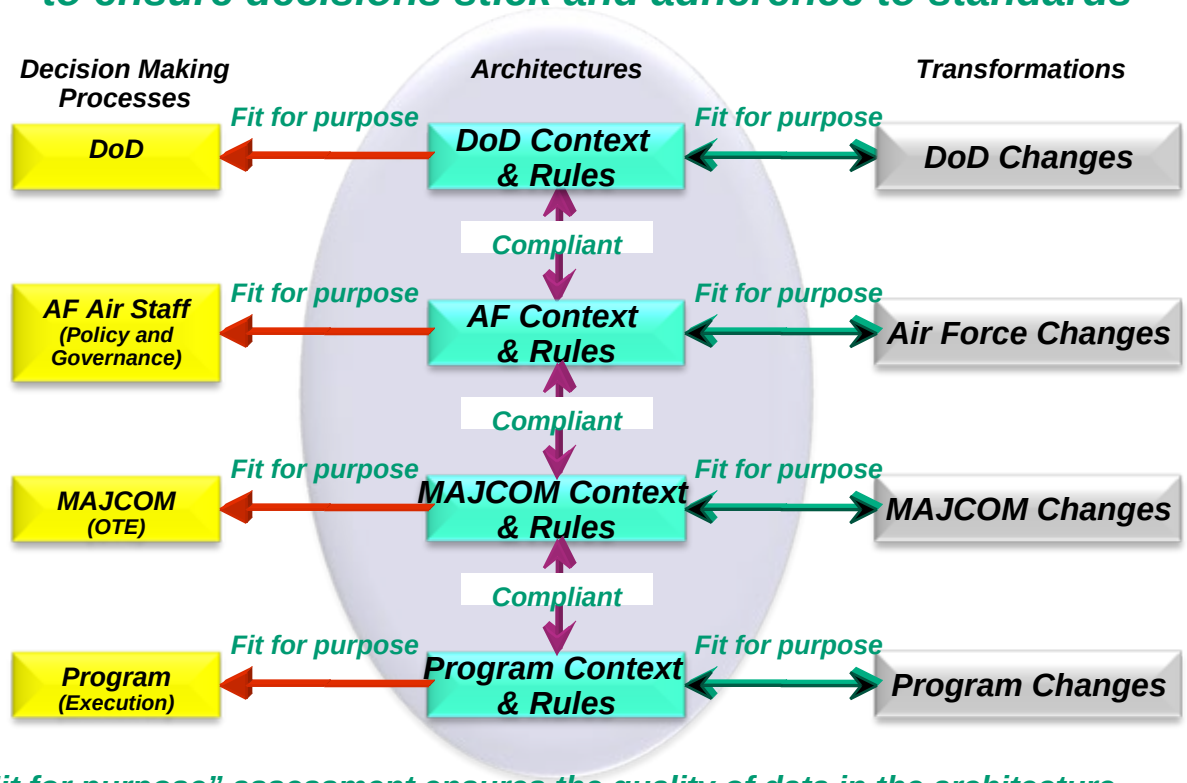
Effective Decision-Support Capability
- Requirements driven
- Customer focused
- Clear scope and purpose

Functioning Governance Capability
- Reliable Processes
- Fit-for-purpose
- Fit-for-federation



Use, Build, Govern

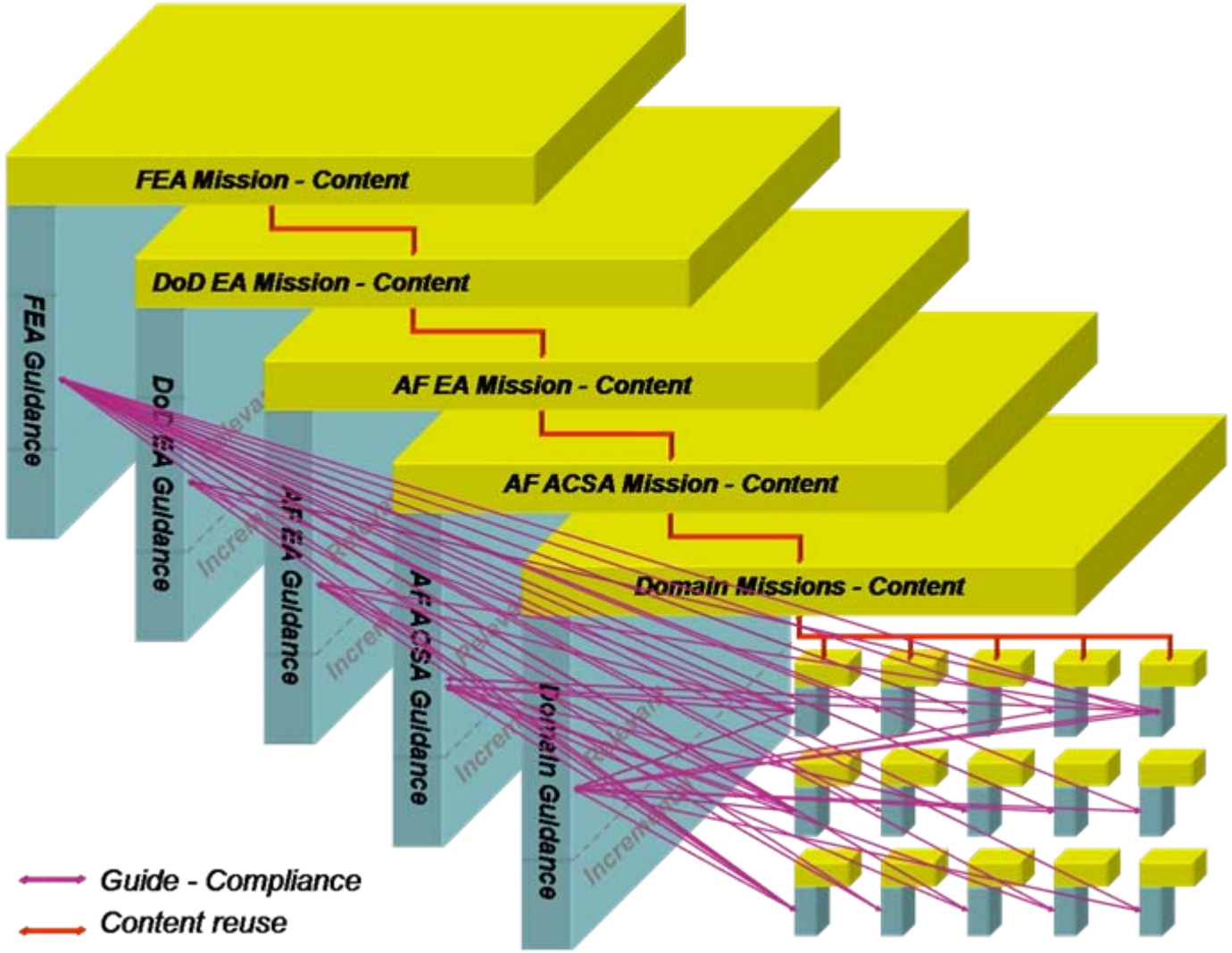
Architectures assessed as "fit for purpose" and "compliant" to ensure decisions stick and adherence to standards



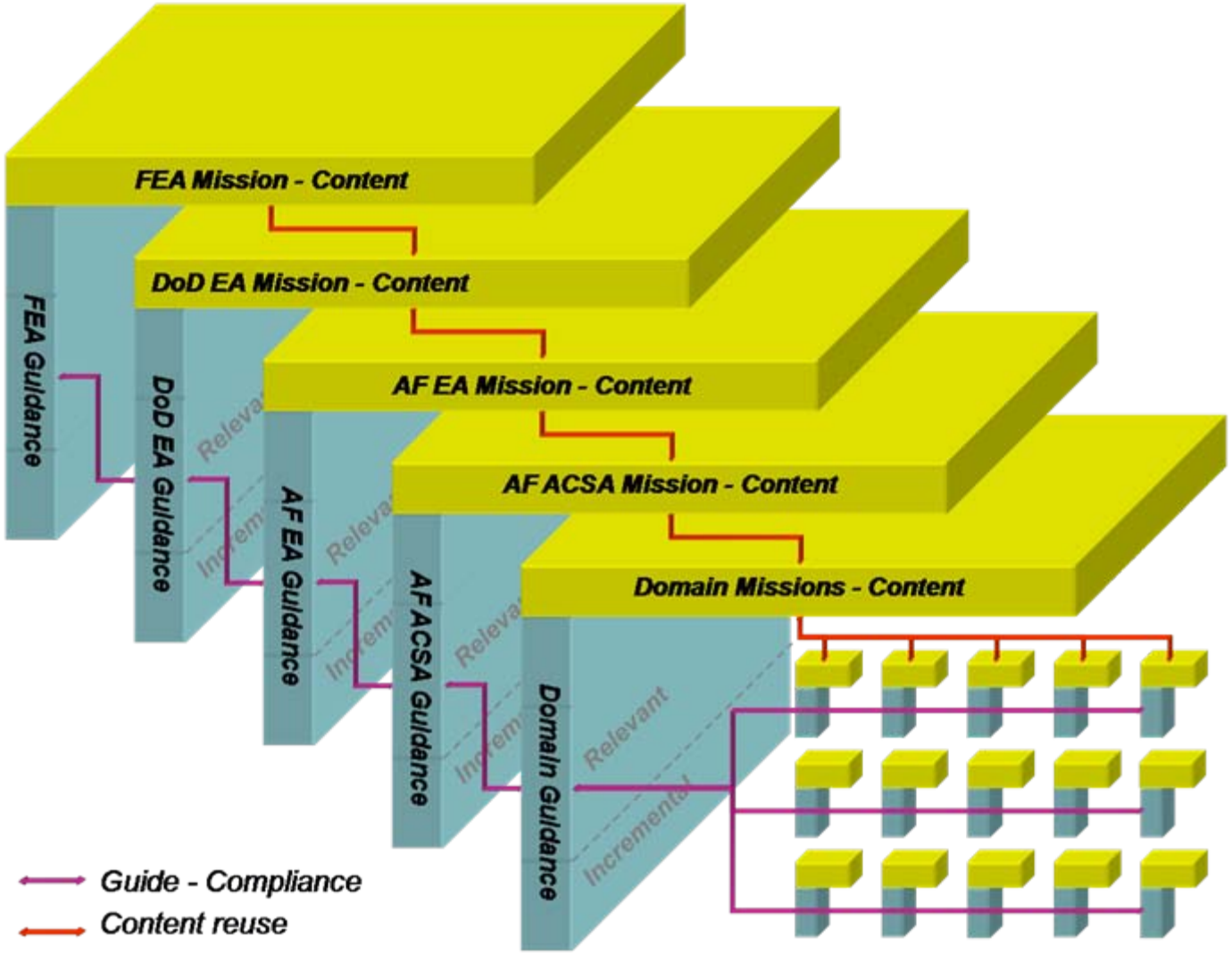
"Fit for purpose" assessment ensures the quality of data in the architecture supports the decision making process and is good enough to guide the transformation effort.

Compliance assessment ensures that the architectures are complete and adhere to the rules of related architectures and the rules of developing architectures.

Want to avoid



Want to enable



...

*Highly **cohesive** set of capabilities delivered to the field (e.g. MAJCOMs)*

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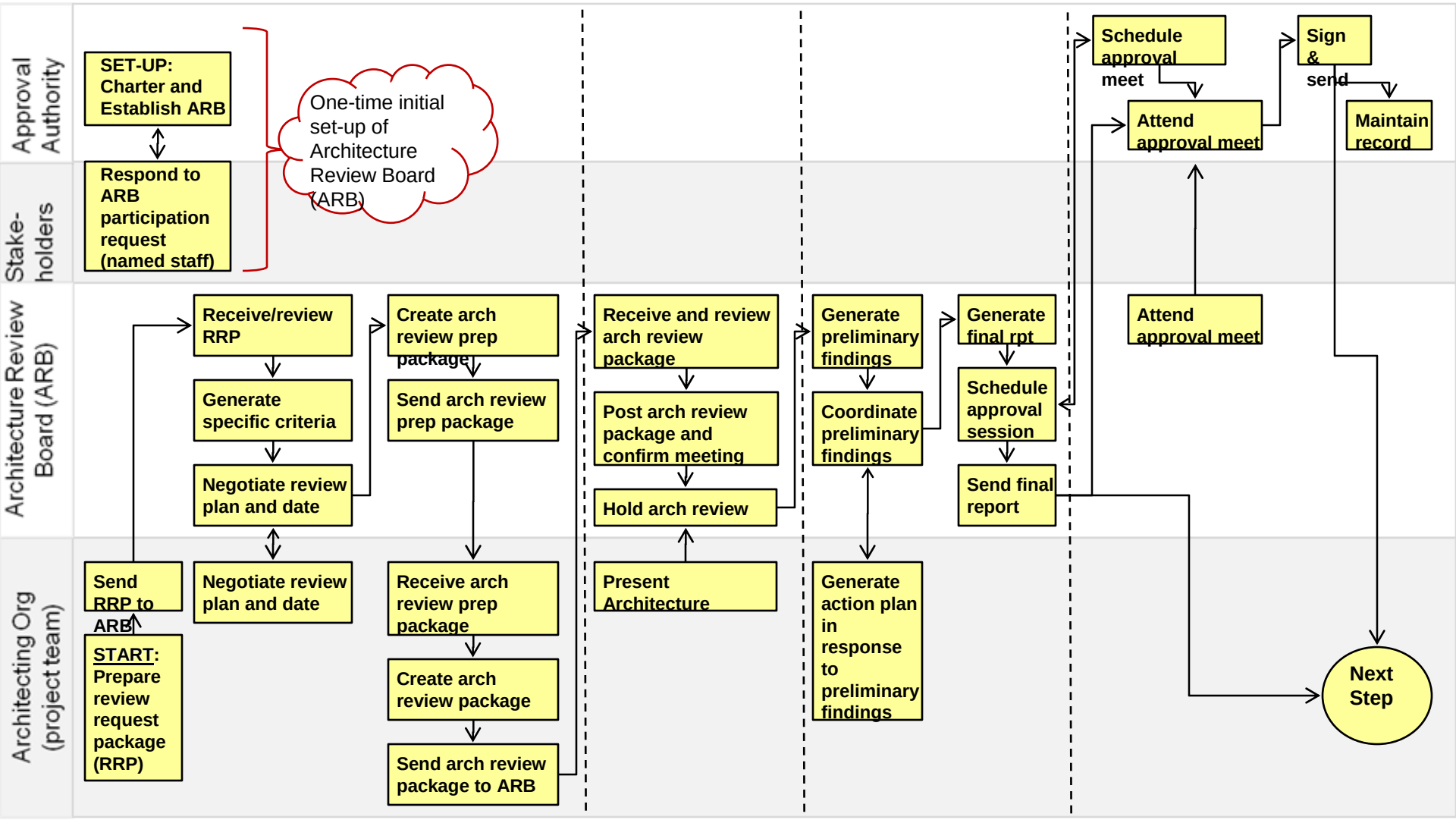
Approval Process

(Level 2)



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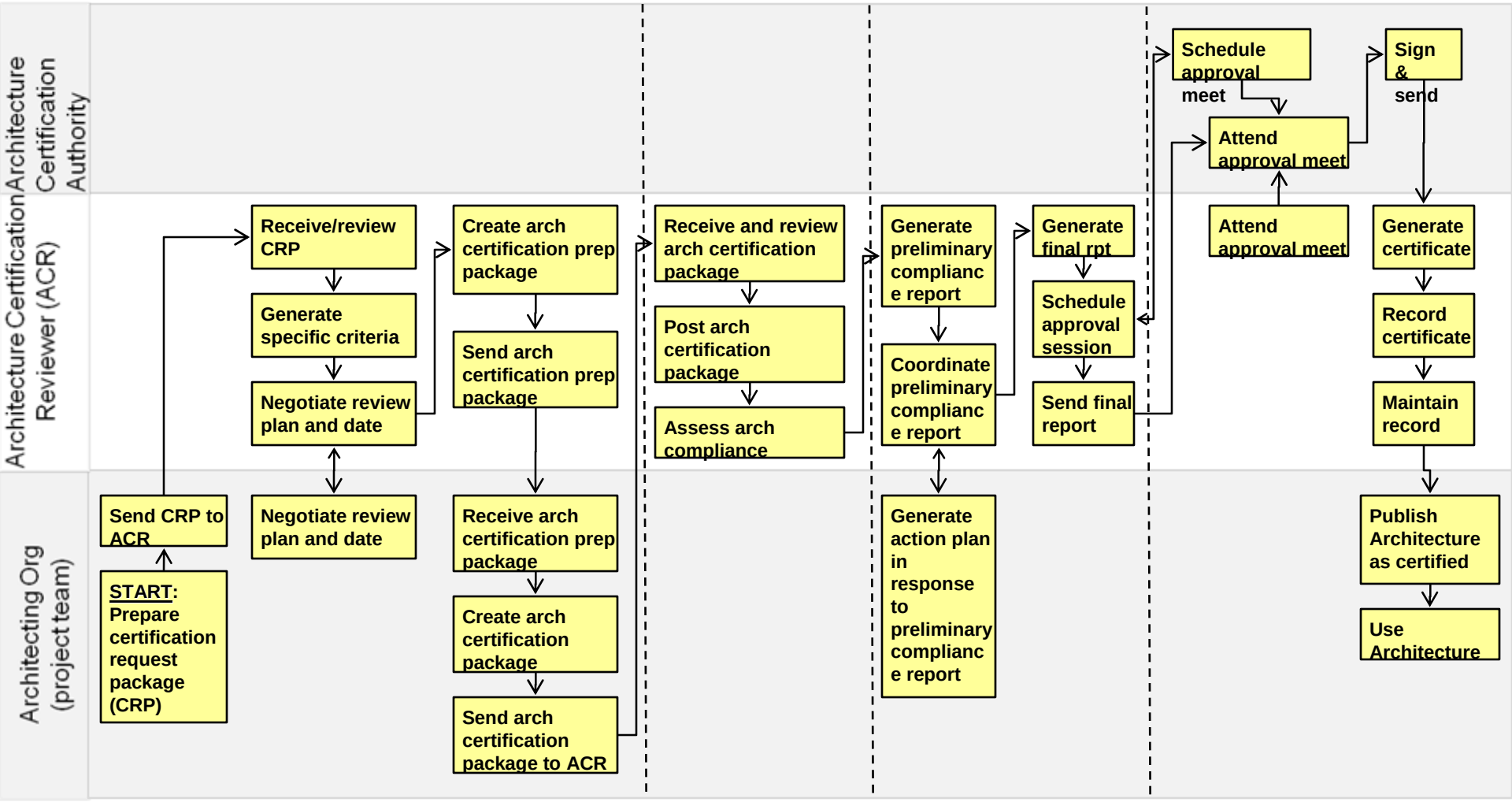
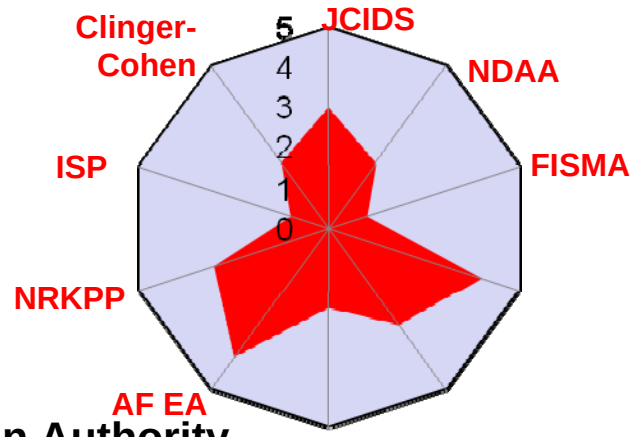
Certification Process

(Level 2)



AF Compliance Reports

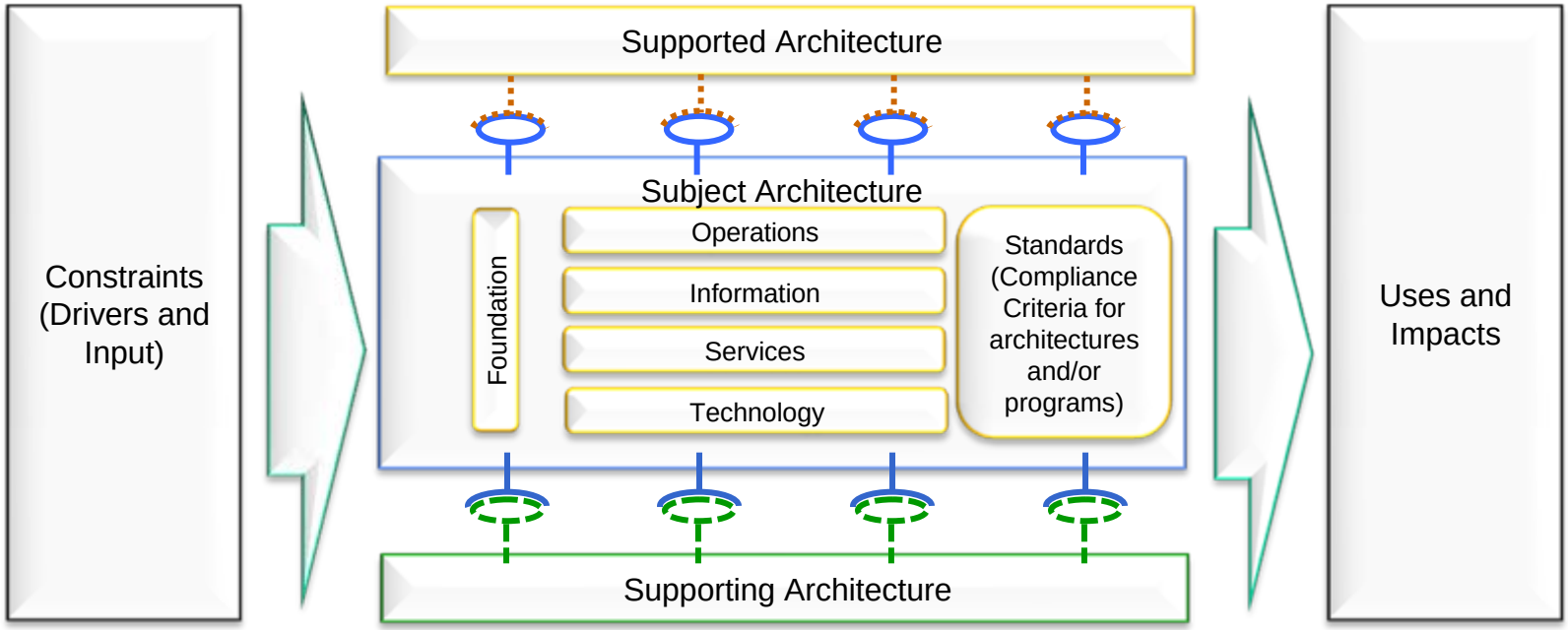
- **AF Compliance Report**
  - Reports on the architecture compliance assessment
  - Contains detailed assessment of the subject's current degree of compliance and the required actions to achieve full compliance in cases where full compliance has not yet been reached



- **AF Compliance Reports should be**
  - Reviewed
  - Approved
  - Retained, and
  - Made accessible (e.g., web-posted)
  - Controlled by the Air Force Architecture Certification Authority

- **AF Architecture Compliance Plans**
  - Condition to achieve full certification in the event of non-compliance; will include:
    - Detailed assessment of the current degree of compliance
    - Key requirements and estimated deadline to achieve compliance
    - Actions needed to achieve compliance and identification of the associated risks and dependencies

Architecture Federation



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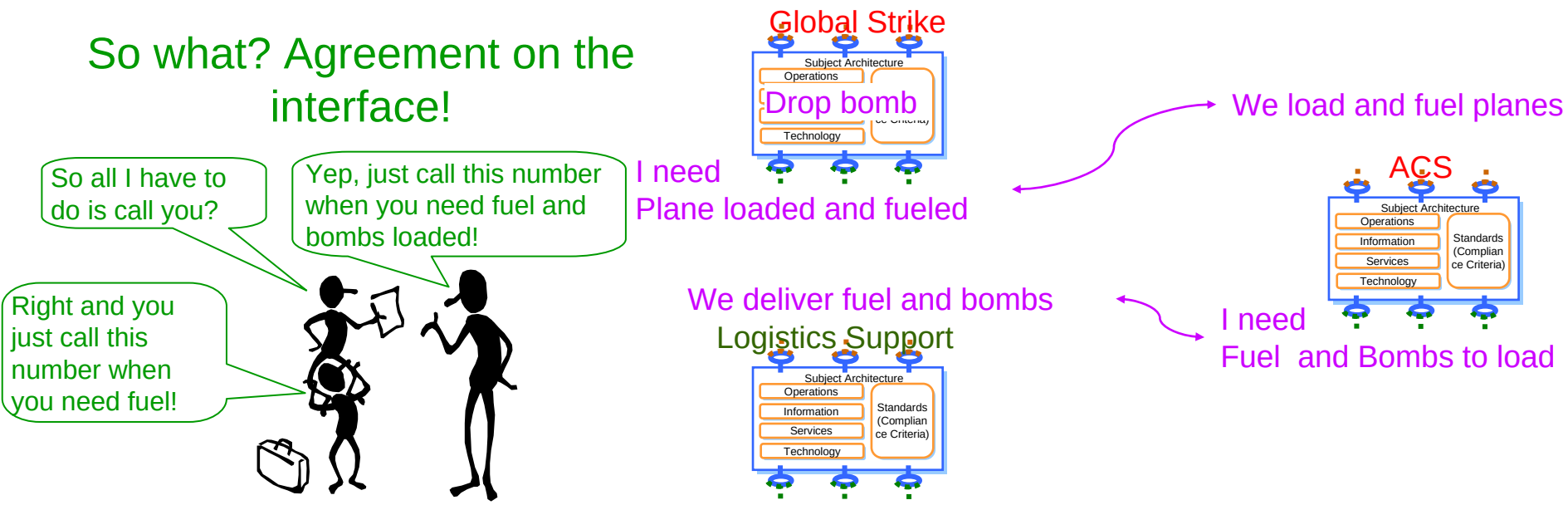
AF Architecture Federation Goals

- Improve interoperation with
  - Joint operations
  - DoD operations
  - AF operations
- Improve investment decisions / resource allocation
- Develop mission-focused architectures with meaningful relationships (interdependencies)
- Support
  - process improvement
  - service orientation, and
  - information transparency

Situational assessment

- **Operational interdependency focused models are a sound foundation for federating**
  - **Operational interdependency focus is based on an "I need/we provide" relationship pairing – i.e. a service focus (process, data, human, ...)**
  - **Operational interdependency focus yields healthy discussion on interdependent touch-points that are performed for the MISSION**

So what? Agreement on the interface!



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Making the Connections:
Delivering Capability thru the Seams

Joint and AF C2 Architecture

Air and Space Operations Architecture

Execute Course of Action

Report on COA

Report on Readiness

Maneuver Airborne Assets

Global Strike Architecture

Force Application Architecture

Load and Fuel Plane

Report on Battle space

Position Equipment

Position Forces

Maintain Network Access

Agile Combat Support Architecture

Combat Support Effects and Capabilities

Combat Support Processes

Combat Support Information

Combat Support Services

Combat Support Technology

Combat Support Standards (Compliance Criteria)

Architecture Interface Points Described as SLAs

Deliver Material to Depot

Recover Apparatus

Define Force Structure

Logistics Architecture

Force Management Architecture

Keep Airmen Fit to Fight

Train Maintenance Staff

Communicate wirelessly

Authenticate User

Communicate over LAN

Find GFM Service

A1 Personnel Architecture

Cyber Command Architecture

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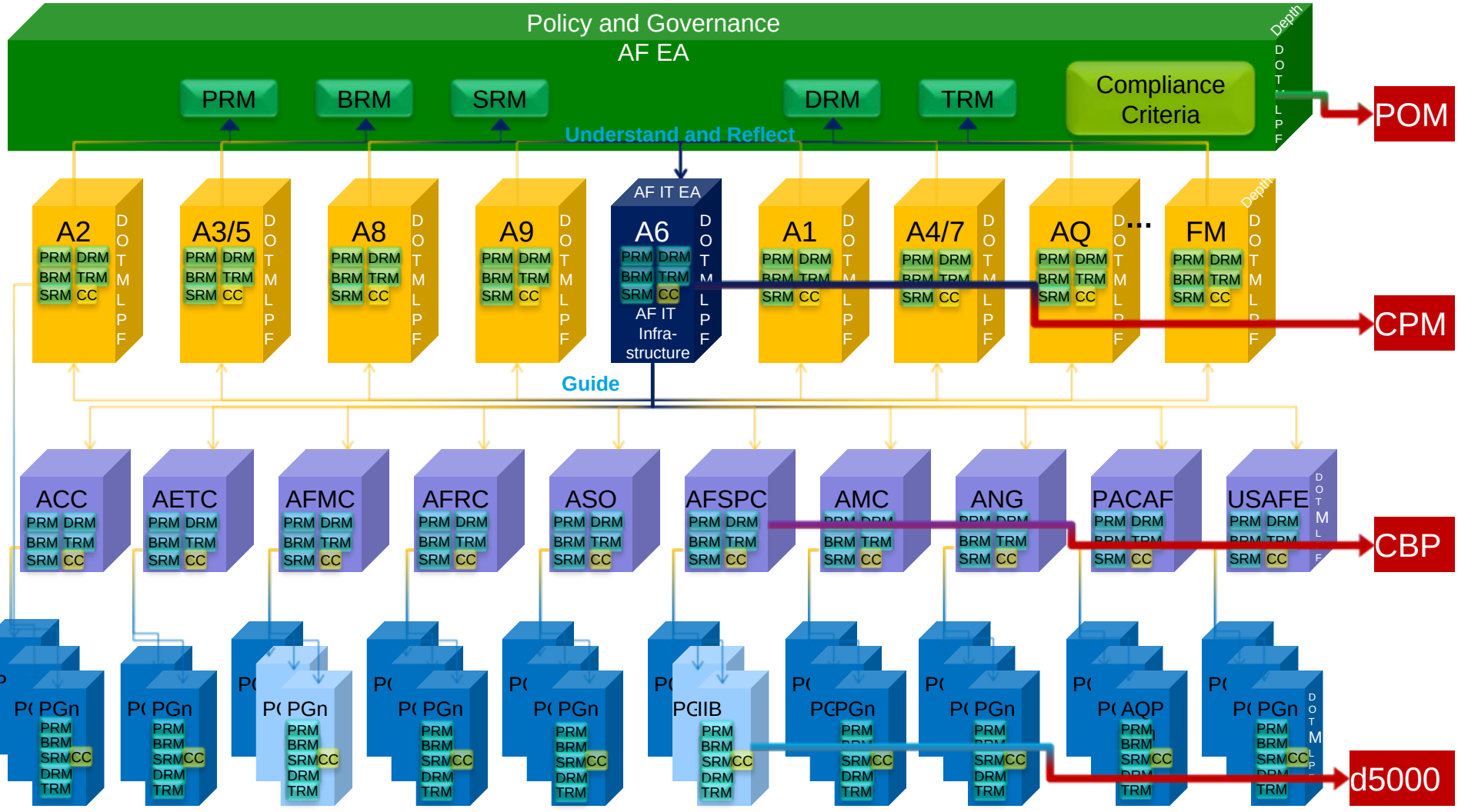
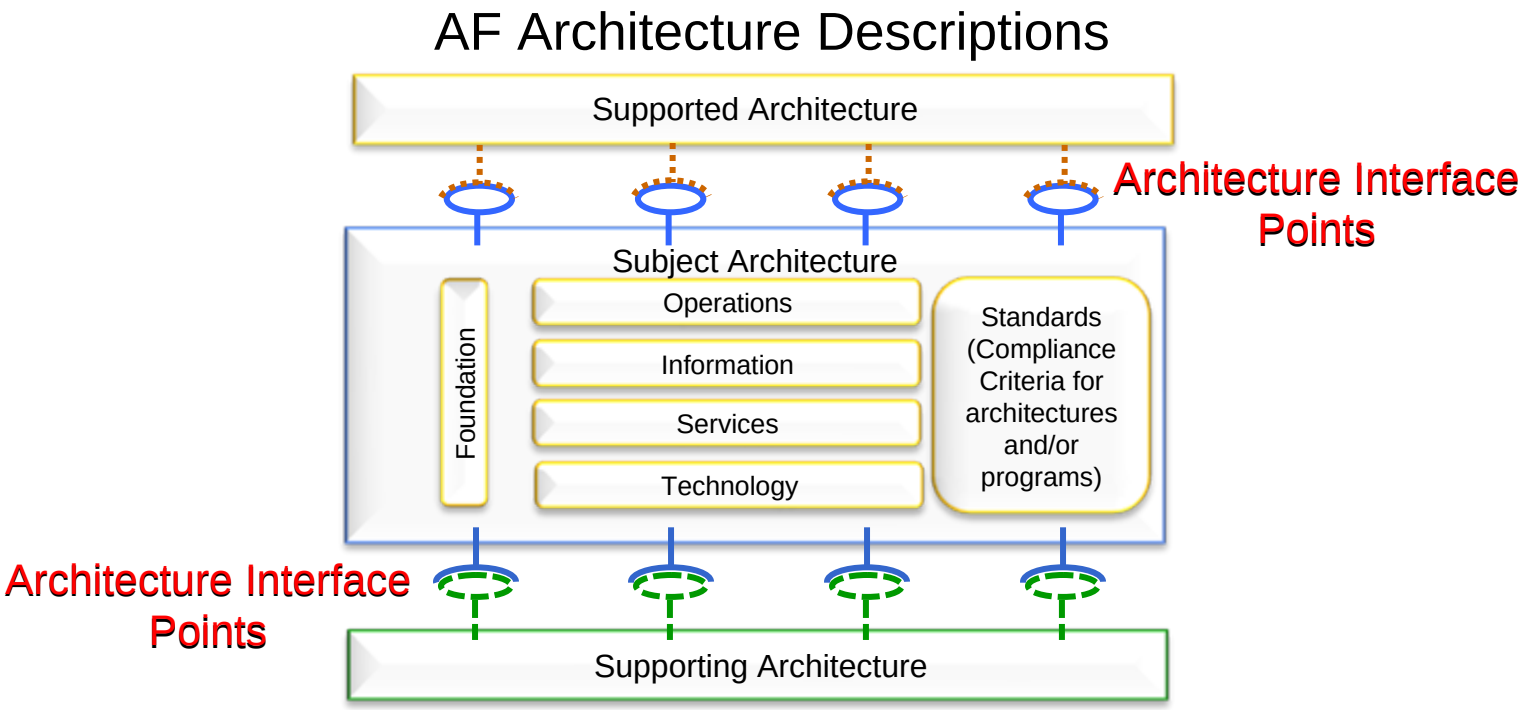
Air Force Architectures

(How should they relate in general?)



Fit for Federation Framework (e.g.)



Minimize, generalize, and standardized!

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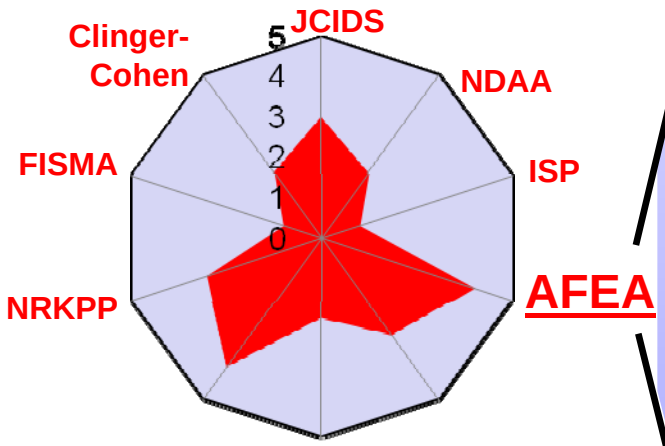
Fit for Federation criteria



General <u>criteria</u> to be <u>applied</u> to architecture efforts

- ✓ **Purpose has been documented and verified by users and usages**
- ✓ **Input has been verified as from authoritative source and authoritative source recorded**
- ✓ **Supported architecture interface points and associated standards identified, documented and verified**
- ✓ **Supporting architecture interface points identified, documented and negotiated with provider**
- ✓ **Specific architecture Standards (Compliance Criteria) established, documented, and verified**
- ✓ **Output has been verified as fit for use**

Roles in Federation:
Who is responsible for what?

- Architecting organizations
  - Create new Architectures that are Fit For Federation (aka Federate-able) out the box
  - Augment existing architectures to be Fit For Federation
  - Get architectures approved
  - Get architectures certified
- SAF/A6PA
  - It is SAF/A6PA's role to "Federate" the AF
  - SAF/A6PA will federate any architecture that is formally certified

Fit For Federation Enables

- Lower cost of integration and interoperability
- Improved efficiencies and operational effectiveness
  - Reduced redundancy and improved scalability
  - Process improvement, service orientation, and information transparency
- An Interoperable Air Force
  - With other services and coalition partners
  - Defined by operational interdependencies
  - Overall picture of the Air Force

Institutionalizing Fit For Federation

- Fit For Federation will be embedded in
  - Air Force Policy Document – AFPD 33-10
  - Air Force Instruction –AFI 33-401 or substitute
  - Air Force Manual (s) – AFMAM XX-XXX (TBD)
  - Air Force Guidance – AF Architecture Framework
- Current state constitutes minor updates
  - Air Force Instruction – AFI 33-401 (Interim Change 1)

Backup

Questions?